

**DRAFT**

**SHEA/BAKER RANCH**

**SUPPLEMENTAL**

**ENVIRONMENTAL**

**IMPACT REPORT**

**SCH NO. 2004071039**



*prepared for:*

**CITY OF LAKE FOREST**

*Contact:*  
Carrie Tai, AICP  
Senior Planner

*prepared by:*

**THE PLANNING  
CENTER|DC&E**

*Contact:*  
Konstanza Dobreva  
Senior Planner

**FEBRUARY 2012**

**DRAFT**

**SHEA/BAKER RANCH**

**SUPPLEMENTAL**

**ENVIRONMENTAL**

**IMPACT REPORT**

**SCH NO. 2004071039**



*prepared for:*

**CITY OF LAKE FOREST**

25550 Commercentre Drive  
Suite 100  
Lake Forest, CA 92630  
Tel: 949.461.3400 • Fax: 949.949-461-3512  
E-mail: [ctai@lakeforestca.gov](mailto:ctai@lakeforestca.gov)

**Contact:**  
Carrie Tai, AICP  
Senior Planner

*prepared by:*

**THE PLANNING  
CENTER|DC&E**

3 MacArthur Plance, Suite 1100  
Santa Ana, CA 92707  
Tel: 714.966.9220 • Fax: 714.966.9221  
E-mail: [information@planningcenter.com](mailto:information@planningcenter.com)  
Website: [www.planningcenter.com](http://www.planningcenter.com)

**Contact:**  
Konstanza Dobreva  
Senior Planner

**COLF-03.0E**

**FEBRUARY 2012**

## *Table of Contents*

---

<b>Section</b>	<b>Page</b>
<b>1. EXECUTIVE SUMMARY .....</b>	<b>1-1</b>
1.1 INTRODUCTION .....	1-1
1.2 PROJECT BACKGROUND.....	1-1
1.3 PROJECT SUMMARY .....	1-2
1.4 ENVIRONMENTAL PROCEDURES.....	1-3
1.4.1 EIR Format .....	1-5
1.5 SUMMARY OF PROJECT ALTERNATIVES.....	1-6
1.5.1 Reduced Grading Alternate Land Use Plan Alternative.....	1-8
1.5.2 Reduced Intensity/Reduced Grading Alternate Land Use Plan Alternative .....	1-9
1.6 ISSUES TO BE RESOLVED .....	1-11
1.7 AREAS OF CONTROVERSY .....	1-11
1.8 SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE AFTER MITIGATION.....	1-11
<b>2. INTRODUCTION.....</b>	<b>2-1</b>
2.1 PURPOSE OF THE SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT .....	2-1
2.2 NOTICE OF PREPARATION AND MODIFIED INITIAL STUDY .....	2-2
2.3 SCOPE OF THIS DSEIR.....	2-4
2.3.1 Impacts for Which Circumstances in Public Resources Code, section 21166 or State CEQA Guidelines, section 15162 Are Not Triggered .....	2-4
2.3.2 Potentially Significant Adverse Impacts.....	2-4
2.3.3 Unavoidable Significant Adverse Impacts .....	2-5
2.4 INCORPORATION BY REFERENCE.....	2-5
2.5 FINAL SEIR CERTIFICATION .....	2-8
2.6 MITIGATION MONITORING .....	2-9
<b>3. PROJECT DESCRIPTION .....</b>	<b>3-1</b>
3.1 PROJECT LOCATION .....	3-1
3.2 STATEMENT OF OBJECTIVES.....	3-1
3.3 PROJECT CHARACTERISTICS .....	3-2
3.3.1 Project Background .....	3-2
3.3.2 Existing Land Use and Zoning.....	3-9
3.3.3 Surrounding Land Use.....	3-10
3.3.4 Proposed Land Use .....	3-10
3.3.5 Project Phasing.....	3-14
3.4 INTENDED USES OF THE DSEIR .....	3-21
<b>4. ENVIRONMENTAL SETTING.....</b>	<b>4-1</b>
4.1 INTRODUCTION .....	4-1
4.2 REGIONAL ENVIRONMENTAL SETTING .....	4-1
4.2.1 Regional Location .....	4-1
4.2.2 Regional Planning Considerations .....	4-1
4.3 LOCAL ENVIRONMENTAL SETTING.....	4-1
4.3.1 Location and Land Use.....	4-2
4.3.2 General Plan and Zoning.....	4-2
4.3.3 Climate and Air Quality .....	4-3



# *Table of Contents*

---

<b>Section</b>		<b>Page</b>
4.4	ASSUMPTIONS REGARDING CUMULATIVE IMPACTS.....	4-4
<b>5.</b>	<b>ENVIRONMENTAL ANALYSIS.....</b>	<b>5.1-1</b>
5.1	AIR QUALITY.....	5.1-1
5.1.1	Environmental Setting.....	5.1-1
5.1.2	Project Design Features.....	5.1-12
5.1.3	Thresholds of Significance .....	5.1-14
5.1.4	Environmental Impacts .....	5.1-16
5.1.5	Cumulative Impacts .....	5.1-24
5.1.6	Existing Regulations .....	5.1-24
5.1.7	Level of Significance Before Mitigation.....	5.1-25
5.1.8	Applicable OSA Program EIR Mitigation Measures.....	5.1-26
5.1.9	Additional Mitigation Measures.....	5.1-27
5.1.10	Level of Significance After Mitigation.....	5.1-27
5.2	GREENHOUSE GAS EMISSIONS .....	5.2-1
5.2.1	Environmental Setting.....	5.2-1
5.2.2	Project Design Features.....	5.2-10
5.2.3	Thresholds of Significance .....	5.2-12
5.2.4	Environmental Impacts .....	5.2-13
5.2.5	Cumulative Impacts .....	5.2-19
5.2.6	Existing Regulations .....	5.2-20
5.2.7	Level of Significance Before Mitigation.....	5.2-20
5.2.8	Applicable OSA Program EIR Mitigation Measures.....	5.2-20
5.2.9	Additional Mitigation Measures.....	5.2-21
5.2.10	Level of Significance After Mitigation.....	5.2-22
<b>6.</b>	<b>SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS .....</b>	<b>6-1</b>
6.1.1	Air Quality.....	6-1
6.1.2	Greenhouse Gas Emissions .....	6-2
<b>7.</b>	<b>ALTERNATIVES TO THE PROPOSED PROJECT .....</b>	<b>7-1</b>
7.1	INTRODUCTION .....	7-1
7.1.1	Purpose and Scope .....	7-1
7.1.2	Project Objectives .....	7-3
7.2	ALTERNATIVES CONSIDERED AND REJECTED DURING THE SCOPING/PROJECT PLANNING PROCESS.....	7-3
7.2.1	OSA PEIR Alternatives .....	7-4
7.2.2	Alternative Development Areas.....	7-6
7.2.3	No Development/Existing Use Alternative .....	7-6
7.2.4	No Development/Existing General Plan Alternative.....	7-7
7.2.5	Reduced Density to Eliminate Significant and Unavoidable Impacts Alternative	7-7
7.3	ALTERNATIVES SELECTED FOR FURTHER ANALYSIS .....	7-7
7.4	REDUCED GRADING ALTERNATE LAND USE PLAN ALTERNATIVE .....	7-8
7.4.1	Air Quality.....	7-9
7.4.2	Greenhouse Gas Emissions .....	7-10
7.4.3	Conclusion .....	7-10

## *Table of Contents*

---

<b>Section</b>		<b>Page</b>
7.5	REDUCED INTENSITY/REDUCED GRADING ALTERNATIVE.....	7-11
7.5.1	Air Quality.....	7-12
7.5.2	Greenhouse Gas Emissions .....	7-13
7.5.3	Conclusion .....	7-13
7.6	ENVIRONMENTALLY SUPERIOR ALTERNATIVE.....	7-14
<b>8.</b>	<b>IMPACTS NOT TRIGGERING FURTHER ENVIRONMENTAL REVIEW .....</b>	<b>8-1</b>
8.1	ASSESSMENT IN THE MODIFIED INITIAL STUDY .....	8-1
<b>9.</b>	<b>SIGNIFICANT IRREVERSIBLE CHANGES DUE TO THE PROPOSED PROJECT.....</b>	<b>9-1</b>
<b>10.</b>	<b>GROWTH-INDUCING IMPACTS OF THE PROPOSED PROJECT .....</b>	<b>10-1</b>
<b>11.</b>	<b>ORGANIZATIONS AND PERSONS CONSULTED.....</b>	<b>11-1</b>
<b>12.</b>	<b>QUALIFICATIONS OF PERSONS PREPARING EIR .....</b>	<b>12-1</b>
<b>13.</b>	<b>BIBLIOGRAPHY .....</b>	<b>13-1</b>
13.1	REFERENCES.....	13-1
13.2	PERSONAL COMMUNICATIONS .....	13-2
13.3	WEBSITES .....	13-2



## **APPENDICES**

- A Notice of Preparation (NOP) and Initial Study
- B NOP Comments
- C Air Quality Analysis Technical Studies
- D OSA Traffic Memo

## *List of Figures*

---

<b>Figure</b>		<b>Page</b>
Figure 3-1	Regional Location .....	3-3
Figure 3-2	Local Vicinity .....	3-5
Figure 3-3	Aerial Photograph .....	3-7
Figure 3-4	Existing Land Use Designations .....	3-11
Figure 3-5	Phase 1 Grading Plan .....	3-15
Figure 3-6	Phase 2 Grading Plan .....	3-17
Figure 3-7	Overall Project Phasing.....	3-19

## *List of Tables*

---

<b><i>Table</i></b>		<b><i>Page</i></b>
Table 1-1	Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation.....	1-13
Table 2-1	NOP Responses.....	2-3
Table 4-1	List of Cumulative Projects .....	4-4
Table 5.1-1	Ambient Air Quality Standards for Criteria Pollutants.....	5.1-7
Table 5.1-2	Attainment Status of Criteria Pollutants in the South Coast Air Basin .....	5.1-8
Table 5.1-3	Ambient Air Quality Monitored at Mission Viejo and Costa Mesa Stations .....	5.1-10
Table 5.1-4	SCAQMD Regional Significance Thresholds.....	5.1-15
Table 5.1-5	SCAQMD Localized Significance Threshold: Screening Level Analysis .....	5.1-16
Table 5.1-6	SCAQMD Localized Significance Thresholds Based on Ambient Air Quality Standards for Projects Larger than 5 Acres .....	5.1-16
Table 5.1-7	Construction Schedule .....	5.1-17
Table 5.1-8	Construction Equipment Utilized by Construction Phase .....	5.1-18
Table 5.1-9	Short-Term Regional Construction Emissions.....	5.1-19
Table 5.1-10	Equipment Specific Grading Rates.....	5.1-20
Table 5.1-11	Construction LST Impacts .....	5.1-21
Table 5.1-12	Long-Term Operational LST Numbers .....	5.1-22
Table 5.1-13	Shea/Baker Ranch Long-Term Regional Operational Emissions.....	5.1-24
Table 5.2-1	Scoping Plan GHG Reduction Measures Toward 2020 Target.....	5.2-4
Table 5.2-2	Greenhouse Gases and Their Relative Global Warming Potential Compared to CO <sub>2</sub> .....	5.2-7
Table 5.2-3	Long-Term Operational Greenhouse Gas Emissions.....	5.2-15
Table 5.2-4	Project Compliance with Greenhouse Gas Emission Reduction Strategies .....	5.2-18
Table 7-1	Build-out Statistical Summary.....	7-8
Table 7-2	Reduced Grading Land Use Plan Statistical Summary .....	7-9
Table 7-3	Reduced Intensity/Reduced Grading Buildout Statistical Summary .....	7-12
Table 7-4	Summary of Impacts of Alternatives Compared to the Proposed Project.....	7-15
Table 8-1	Impacts Found Not to Be Significant.....	8-1



## *Abbreviations and Acronyms*

---

AAQS	Ambient Air Quality Standards
AB	Assembly Bill
amsl	above mean sea level
AQMP	Air Quality Management Plan
ATCM	Airborne Toxic Control Measure
BAU	business-as-usual
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
Cal/EPA	California Environmental Protection Agency
CARB	California Air Resources Board
CAT	California Climate Action Team
CBC	California Building Code
CCAA	California Clean Air Act
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CNRA	California Natural Resources Agency
CO	carbon monoxide
CO <sub>2</sub>	carbon dioxide
DA	development agreement
EIR	Environmental Impact Report
EPA	U.S. Environmental Protection Agency
FBI	Federal Bureau of Investigation
GHG	greenhouse gas
HVAC	heating, ventilating, and air conditioning system
IPCC	Intergovernmental Panel on Climate Change
IRWD	Irvine Ranch Water District
LCFS	Low Carbon Fuel Standard
LST	localized significance thresholds
MCAS	Marine Corps Air Station
MM	mitigation measure
MPO	metropolitan planning organization
NAAQS	National Ambient Air Quality Standards

## *Abbreviations and Acronyms*

---

NCCP/HCP	Natural Communities Conservation Program/Habitat Conservation Plan
NOP	Notice of Preparation
NO <sub>x</sub>	nitrogen oxides
O <sub>3</sub>	ozone
OPR	California Governor's Office of Planning and Research
Pb	lead
PDF	project design feature
PM	particulate matter
RPS	renewable portfolio standard
RTP	Regional Transportation Plan
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCS	Sustainable Communities Strategy
SEER	Seasonal Energy Efficiency Ratio
SoCAB	South Coast Air Basin
SO <sub>x</sub>	sulfur oxides
SRA	source receptor area
TAC	toxic air contaminants
USC	United States Code
VMT	vehicle miles traveled
VOC	volatile organic compounds



## *Abbreviations and Acronyms*

---

*This page intentionally left blank.*